## **Appendix**



#### ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

# MINIMUM REQUIREMENTS DECISION GUIDE WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: North Fork Blackfoot River 2018 Bioassays

**MRDG Step 1: Determination** 

Determine if Administrative Action is Necessary

**Description of the Situation** 

What is the situation that may prompt administrative action?

Montana Fish, Wildlife and Parks (MFWP) compiled a plan to restore native fish in 45-miles of interconnected stream habitat and ?? acres of lake habitat in the headwaters of the North Fork Blackfoot River (Clancey et al. 2018). The proposed North Fork Blackfoot River Native Fish Restoration Project Area lies entirely with the Scapegoat Wilderness. This plan calls for additional tasks to be completed in 2018 to thoroughly analyze this proposed future restoration project. State of Montana's Environmental Assessment and FS's MRDG for the proposed future restoration project will be forthcoming.

This project specific MRDG will only analyze those proposed 2018 actions. For greater detail on the existing condition and purpose and need for proposed future restoration project see Pierce et al (2017) and Clancey et al (2018). In addition, a "Supplement to Minimum Requirements Analysis/Decision Guide (MRA/MRDG): Evaluating Proposals for Ecological Intervention in Wilderness" was written for proposed future restoration project (Hahn et al 2016). This report can be found within the Pierce et al (2017) on pages 71-93. Supplements are written to address ecological intervention proposals that commonly entail complex legal, scientific, and ethical questions that may be beyond the realm of a typical MRDG. The majority of the discussion within the intervention supplement centers around the issue of historic fish stocking, presence/absence, westslope cutthroat trout (WCT) genetics and proposed stocking of which are not being proposed in 2018.

In preparation for planning the proposed future restoration project, MFWP has proposed the following tasks be completed in 2018. Completing these tasks would help managers determine the size and scale of the proposed future restoration effort to remove non indigenous fish species from the project area. Managers would be able to make better informed decisions regarding this proposal and more accurately reflect and mitigate future effects. These tasks include: 1) more precise estimates of the quantity of piscicide (CFT Legumine liquid rotenone) and neutralizing agent (potassium permanganate) necessary to conduct the project, which will provide useful information toward determining the most efficient and acceptable method of transporting these supplies; 2) the concentration and frequency of application of the piscicide necessary to achieve the project goal of wide scale suppression or eradication of the non-native trout; 3) the concentration of neutralizing agent necessary to detoxify the stream determine more precisely where piscicide treatments should be initiated on each stream; and, 4) assist in planning for crew distribution and

_	Options Outside of Wilderness		
Carr action be tak	ren outside of wilderness that adequately addresses the situation?		
YES			
✓ NO	EXPLAIN & COMPLETE STEP 1 OF THE MRDG		
Explain:			

The 2018 bioassay work is proposed along a sub-sample of streams that are targeted for treatment in the future. Bioassay treatments are best accomplished along the same streams to address conditions and factors that crews will face when actually treating the drainage. Since the proposed larger project is located within the Scapegoat Wilderness, it is best served that the 2018 bioassay streams be located within the near vicinity.
the scapegoat whiterness, it is best served that the 2016 bloassay streams be located within the hear vicinity.

## **Criteria for Determining Necessity**

Is action necessary to meet any of the criteria below?

## A. Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that <u>requires</u> action? Cite law and section.

YES		✓ NO
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## Explain:

There are no existing rights or special provisions within the Wilderness Act itself or subsequent wilderness legislation regarding the Scapegoat Wilderness that requires managers to approve either the proposed 2018 actions or the proposed future restoration project.

However, management actions within wilderness may be conducted to re-establish or perpetuate an indigenous species adversely affected by human influence or perpetuate or recover a threatened or endangered species.

## B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

✓ YES NO

## Explain:

The USFWS has determined that bull trout is warranted to be listed as a threatened species under ESA.

The USFWS has determined that WCT is not warranted to be listed as either threatened or endangered under ESA. WCT is currently a FS Sensitive Species which are managed under the authority of the National Forest Management Act (NFMA) and are administratively designated by the Regional Forester (FSM 2670.5). FSM 2670.22 requires the maintenance of viable populations of native and desired non-native species and to avoid actions that may cause a species to become listed as threatened or endangered under ESA. NFMA directs the FS to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." [16 U.S.C. 1604(g)(3)(B)]. Providing ecological conditions to support diversity of native plant and animal species in the project area satisfies the statutory requirements. The FS's focus for meeting the requirements of NFMA and its implementing regulations is on assessing habitat to provide for a diversity of species and their conservation needs so that listing is prevented under the ESA. The conservation needs of BT and WCT include maintaining habitat free from competing and hybridizing species and population expansion and protection. This project is compliant with the NFMA in that it would further these conservation needs.

#### C. Wilderness Character

Is action necessary to preserve one or more of the five qualities of wilderness character?

#### **UNTRAMMELED**

YES		✓ NO
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#### Explain:

The proposed 2018 actions are necessary to mitigate the negative effects of past stocking actions to the project area and the larger scale of the Scapegoat Wilderness as a whole. The proposed 2018 actions would not immediately mitigate the negative effects but collected data would help managers determine the size and scale of the proposed future restoration efforts to remove non indigenous fish species from the project area. Managers would be able to make better informed decisions regarding this proposal and more accurately reflect and mitigate future effects.

There would be very localized reaches of stream where nonidigenous fish would be removed in 2018 but full recovery of non-indigenous fish would be expected within 1-2 years if no follow up treatments are planned.

One can easily make the case that the proposed future restoration project would result in some level of effect on the trammeling quality of wilderness character. The future project is intended to reduce the threat of hybridization from past trammeling actions, but that does not get away from the fact that we would be altering the environment to meet our anthropogenically desired state. The future project would not completely preserve untrammeled qualities within the project area.

## **UNDEVELOPED**

	YES	✓ NO		
Explain:				
No new develo	opments or ground dis	sturbing activities are bein	g proposed.	
NATURAL				
	YES	✓ NO		

#### Explain:

The proposed 2018 actions may or may not necessary to preserve the natural quality of wilderness character. It is difficult to answer this question not knowing if WCT are indigenous or non-indigenous above the North Fork Falls. The biological evidence presented by Pierce et al (2017) is inconclusive in making this determination. Like the untrammeling quality discussed above, the proposed 2018 actions will not fully accomplish the task of mitigating the negative effects of past stocking of non-indigenous fish, but it is necessary to help managers determine the size and scale of the proposed future restoration efforts to remove non indigenous fish species from the project area. Managers would be able to make better informed decisions regarding the future proposal and more accurately reflect and mitigate future effects.

It is expected that the proposed 2018 actions would have short-term negative impacts on certain aquatic invertebrates but full recovery is expected within 1-2 years possibly faster since untreated source waters are located nearby.

The proposed 2018 actions are limited in scope and would not have a large temporal or spatial effect to the naturalness quality of the Scapegoat Wilderness, but by performing this work managers can gain valuable information that would guide future decisions on management actions designed to protect the naturally occurring populations of indigenous trout species in the Wilderness and remove the non indigenous hybridized trout population that threatens to further degrade the fisheries system within the Wilderness. Should the bioassays not take place in 2018 and managers decide to proceed with the future proposed restoration project including fish removal there is a possibility that this non-field tested actions would unnecessarily degrade the natural ecosystem or fail to accomplish project goals.

The proposed future restoration project would not restore the naturalness quality of the Scapegoat Wilderness, but this project would move the needle closer towards natural by replacing existing stock with indigenous locally sourced species. This project would improve naturalness by protecting currently healthy naturally occuring fish populations below the falls.

## SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Explain:	YES	✓ NO				
Unconfined Recr	It is expected that the proposed 2018 actions would have no appreciable effect on Solitude or Primitive & Unconfined Recreation due to the use of non-mechanized tools and party size remaining below the 15-person threshold in the Scapegaot Wilderness.					
remove non indi decisions regardi	These 2018 actions would help managers determine the size and scale of the proposed larger effort to remove non indigenous fish species from the project area. Managers will be able to make better informed decisions regarding this proposal and more accurately reflect and mitigate future effects to the Solitude of the Scapegoat Wilderness.					
OTHER FEAT	OTHER FEATURES OF VALUE					
Explain:	YES	✓ NO				

## **Step 1 Determination**

Is administrative action <u>necessary</u> in wilderness?

#### **Decision Criteria**

- A. Existing Rights or Special Provisions
- B. Requirements of Other Legislation
- C. Wilderness Character

Untrammeled

Undeveloped

Natural

**Outstanding Opportunities** 

Other Features of Value

### **Summary Responses**

Action IS NOT necessary to meet this criterion.

Action IS necessary to meet this criterion.

Action IS NOT necessary to meet this criterion.

Is administrative action necessary in wilderness?

✓ YES	EXPLAIN & PROCEED TO STEP 2 OF THE MRDG
□ NO	

## Explain:

The proposed 2018 bioassay work is proposed along a portion of streams that would be included in the proposed future restoartion project. Bioassay treatments are necessary for various reasons along the same streams to address conditions and factors that crews would face when treating the larger area. Since the proposed future restoartion project is located within the Scapegoat Wilderness, it is best served that the 2018 bioassay streams be located within the near vicinity.

## MRDG Step 2

Determine the Minimum Activity

#### Other Direction

Is there "special provisions" language in legislation (or other Congressional direction) that explicitly allows consideration of a use otherwise prohibited by Section 4(c)?

#### AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

✓ YES	DESCRIBE OTHER DIRECTION
□ NO	

#### Describe Other Direction:

There is no "special provisions" language.

The 2018 proposed actions do conform with:

- 1) The Policies and Guidleines for Fish and Wildlife Management in National Forest and Bureau of Land Management (Bosworth, Clarke and Baughman 2006, aka AFWA agreement);
- 2) Cooperative Agreement for Fish, Wildlife and Habitat Management on National Forest Wilderness Lands in Montana (Tidwell and Hagener 2006);
- 3) The Bob Marshall Fish and Wildlife Management Framework which explicitly addresses this type of project and supports actions to recover threatened and endangered species within the Wilderness;
- 4) Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness (FSM 2323.32 #5).

These guidelines for fish and wildlife management in U.S. Forest Service administered wilderness areas indicate that: chemical treatment may be necessary to prepare waters for the reestablishment of indigenous fish species, consistent with approved wilderness management plans, to conserve or recover Federally listed threatened or endangered species, or to correct undesirable conditions resulting from human activity. Chemical treatments may be authorized by the Federal administering agency through application of the MRDG as outlined in Section E., General Policy.

5) Bull trout and WCT recovery plans or conservation plans ???

## **Time Constraints**

What, if any, are the time constraints that may affect the action?

The bioassays would be conducted to avoid impacts to the gill breathing amphibians such as Columbia spotted frog tadpoles.

The proposed 2018 actions would be completed prior to the beginning of the big game hunting season to mitigate the impact to Wilderness visitors solitude and ensure the safety of project personnel.

## **Components of the Action**

What are the discrete components or phases of the action?

Component X	Example: Transportation of personnel to the project site
Component 1	Transportation of personnel, equipment, and materials into project site
Component 2	Staging of equipment, personnel, and materials in the Scapegoat Wilderness
Component 3	Application of piscide at designated points.
Component 4	Monitoring of efficacy of treatments.
Component 5	Demobilization of equipment and personnel from the site
Component 6	
Component 7	
Component 8	
Component 9	

## Proceed to the alternatives.

Refer to the MRDG Instructions regarding alternatives and the effects to each of the comparison criteria.

## Project Title: North Fork Blackfoot River 2018 Bioassays

## **MRDG Step 2: Alternatives**

Alternative 1: Non-Mechanzied Alternative

## Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

MFWP proposes to treat four short bioassay reaches approximately 1.0 mile in length along East Fork Meadow Creek, Sourdough Creek, Lost Pony Creek and Scotty Creek to address knowledge gaps needed to plan and effectively implement the proposal to remove non-indigenous species from the project area. These bioassays treatments would be implemented using entirely non-mechanized means such as gravity fed drip stations and back pack sprayers. Pack stock would be utilized to transport personnel, materials & supplies, and equipment. Personnel and equipment would be staged at prexisting outfitter camps and FS Administrative sites. All wilderness regulations and minimal disturbance guidelines regarding length of stay, party size limts, pack-in/pack-out, food storage order, use of non-mechanized tools, etc. would be adhered to. The bioassay treatments would occur in late-August.

In preparation for planning the proposed future North Fork Blackfoot River Native Fish Restoration Project, it has been proposed the following tasks be completed in 2018. Completing these tasks would provide the following information, which is useful for project planning and implementation:

- 1) more precise estimates of the quantity of piscicide (CFT Legumine liquid rotenone) and neutralizing agent (potassium permanganate) necessary to conduct the project, which will provide useful information toward determining the most efficient and acceptable method of transporting these supplies;
- 2) the concentration and frequency of application of the piscicide necessary to achieve the project goal of wide scale suppression or eradication of the non-native trout;
- 3) the concentration of neutralizing agent necessary to detoxify the stream determine more precisely where piscicide treatments should be initiated on each stream; and,
- 4) assist in planning for crew distribution and camping site locations.

## **Component Activities**

How will each of the components of the action be performed under this alternative?

Cor	nponent of the Action	Activity for this Alternative
Х	Example: Transportation of personnel to the project site	Example: Personnel will travel by horseback
1	Transportation of personnel, equipment, and materials into project site	All personnel, equipment and materials would travel by foot or by pack string.
2	Staging of equipment, personnel, and materials in the Scapegoat Wilderness	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Camp.
3	Application of piscide at designated points.	Rotenone and potassium permanganate agent would be applied using gravity fed means.
4	Monitoring of efficacy of treatments.	All monitoring would take place on foot or horseback
5	Demobilization of equipment and personnel from the site	All materials and personnel would travel by foot or by horseback.
6		
7		
8		
9		

## Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

## UNTRAMMELED

Cor	nponent Activity for this Alternative	Positive	Negative	No Effect
Х	Example: Personnel will travel by horseback			~
1	All personnel, equipment and materials would travel by foot or by pack string.			<b>&gt;</b>
2	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Can			<b>√</b>
3	Rotenone and potassium permanganate agent would be applied using gravity fed means.			<b>✓</b>
4	All monitoring would take place on foot or horseback			<
5	All materials and personnel would travel by foot or by horseback.			\ \
6				
7				
8				
9				
Tot	Totals		0	NE
Unt	Untrammeled Total Rating		0	

## Explain:

The proposed 2018 actions would allow crews to collect data necessary to assist biologists in planning, designing, and implementing the proposed future restoration project. The proposed future restoration project would help mitigate the negative effects of historic stocking of non-indigenous fish.

## UNDEVELOPED

Cor	nponent Activity for this Alternative	Positive	Negative	No Effect
Х	Example: Personnel will travel by horseback			>
1	All personnel, equipment and materials would travel by foot or by pack string.			<b>✓</b>
2	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Can			<b>✓</b>
3	Rotenone and potassium permanganate agent would be applied using gravity fed means.			<b>✓</b>
4	All monitoring would take place on foot or horseback			<b>✓</b>
5	All materials and personnel would travel by foot or by horseback.			<b>✓</b>
6				
7				
8				
9				
Tot	als	0	0	NE
Und	developed Total Rating	_	0	

## Explain:

No new developments and/or ground disturbing activities are being proposed in 2018.

## NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
Χ	Example: Personnel will travel by horseback			× (
1	All personnel, equipment and materials would travel by foot or by pack string.			
2	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Can			
3	Rotenone and potassium permanganate agent would be applied using gravity fed means.		7	
4	All monitoring would take place on foot or horseback			
5	All materials and personnel would travel by foot or by horseback.			
6				
7				
8				
9				
Totals		0	1	NE
Natural Total Rating		-1		

## Explain:

There would be a short term negative effect to the naturalness of the area due to rotenone and potassium permanganate applications, but this work is neccessary to implement the proposed future restoration project that would result in an eventual increase in naturalness by mitigating the negative effects of historic stocking of non-indigenous fish. It is expected that the proposed 2018 actions would have short-term negative impacts on certain aquatic invertrebrates but full population recovery would be expected within 1-2 years possibly faster since untreated sources are located nearby.

Quantities and application rates of rotenone and potassium permanganate will be presented in the Pesticide Use Permit (PUP) for approval by by the Regional Forester.

## SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Cor	nponent Activity for this Alternative	Positive	Nepative	No Effect
Х	Example: Personnel will travel by horseback			
1	All personnel, equipment and materials would travel by foot or by pack string.			<u> </u>
2	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Can			7
3	Rotenone and potassium permanganate agent would be applied using gravity fed means.			7
4	All monitoring would take place on foot or horseback			
5	All materials and personnel would travel by foot or by horseback.			7
6				
7				
8				
9				
Tot	als	0	0	NE
Solitude or Primitive & Unconfined Recreation Total Rating			0	

## Explain:

It is expected that the proposed 2018 actions would have no appreciable effect on Solitude or Primitive & Unconfined Recreation due to the use of non-mechanized tools and party size remaining below the 15-person threshold in the Scapegaot Wilderness.

## OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect	
Χ	Example: Personnel will travel by horseback			>	
1	All personnel, equipment and materials would travel by foot or by pack string.			<b>✓</b>	
2	Personnel & equipment would stage at Webb Lake Guard Station and Meadow Cr Outfitter Cam			<b>✓</b>	
3	Rotenone and potassium permanganate agent would be applied using gravity fed means.			<b>✓</b>	
4	All monitoring would take place on foot or horseback			<b>✓</b>	
5	All materials and personnel would travel by foot or by horseback.			<b>✓</b>	
6					
7					
8					
9					
Tot	Totals		0	NE	
Oth	Other Features of Value Total Rating		0		
Explain:					

## Summary Ratings for Alternative 1

Wilderness Character			
Untrammeled	0		
Undeveloped	0		
Natural	-1		
Solitude or Primitive & Unconfined Recreation	0		
Other Features of Value	0		
Wilderness Character Summary Rating	-1		

## MRDG Step 2: Alternatives Not Analyzed

Δltern	atives	Not	∆nal\	zed
$\Delta$ ILCIII	auves	1101	Ai iai y	/ <b>L</b> CU

What alternatives were considered but not analyzed? Why were they not analyzed?

Mechanical Removal Alternative using electrofishing and gillnetting. Even with new eDNA technology, project proponents do not believe the project objectives can be achieved because of habitat complexity and size. This alternative would require more wilderness visits, be more expensive, and less safe.

Project Title: North Fork Blackfoot River 2018 Bioassays

## MRDG Step 2: Determination

Refer to the <u>MRDG Instructions</u> before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative				
Alternative 1: No	n-Mechanzied Alternative			
Alternative 2:				
Alternative 3:				
Alternative 4:				
Alternative 5:				
Alternative 6:				
Alternative 7:				
Alternative 8:				
Explain Rationale for Sel	ection.			
document, and MFWP's Enhave no long-term negative decision authorizes one proposed 2018 actions we efforts to remove non indicinformed decisions regard.  Implementation of the prother threatened or endangered	nized alternative as described above within the FS's MRDG, FS's authorizing decision invironmental Assessment. It is expected that the proposed 2018 actions would be effects on any of the five wilderness qualities of wilderness character. My prohibitive activity which includes the application of pesticides in the wilderness. The build help managers determine the size and scale of the proposed future restoration igenous fish species from the project area. Managers would be able to make better ling this proposal and more accurately reflect and mitigate future effects.  Deposed 2018 actions would have no extraordinary circumstances as related to diand/or wilderness charater.  2018 would not establish a precedent for future actions with significant effects or uit a future consideration.			

If more space is needed, continue on the next page...

Explain Rationale for Selection, Continued:
Describe Menitering & Departing Dequirements:
Describe Monitoring & Reporting Requirements:  MFWP would document their findings in a supplemental information report which would be used to
plan the proposed future restoration project.

Approvals	

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

Prohibited Use	Quantity
Mechanical Transport:	
Motorized Equipment:	
Motor Vehicles:	
Motorboats:	
Landing of Aircraft:	
Temporary Roads:	
Structures:	
Installations:	Application of retenone and potassium permanganate.

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

	Name	Position		
be	Bruce Roberts	West Zone Fisheries Biologist, Custer Gallatin NF		
Prepared	Signature		Date	
Pre				
সূ Name Position				
ande	Josh Lattin	Recreation Program Mar	nager, Lincoln RD, HLCNF	
Jue	Signature		Date	
Recommended				
þ	Name	Position		
ğu	Jimmy Gaudry	Region 1 Wilderness Program Manager		
l ü	Signature		Date	
Recommended				
	Name	Position		
, eq	Michael Stansberry	Lincoln District Ranger, HLCNF		
Approved	Signature		Date	
Арк				